



# CCC2400/MCC2400 SERIES COMPACT CAMERAS INSTALLATION/OPERATION

## IMPORTANT SAFEGUARDS AND WARNINGS

Prior to installation and use of the product, the following WARNINGS should be observed.

1. Installation and servicing should be done only by qualified service personnel and conform to all local codes.
2. Power camera only from a UL Listed, Class 2 isolated power supply.
3. Do not touch the image surface of the sensor. If the sensor is accidentally touched, clean it only with isopropanol.
4. Do not expose the camera sensor to very bright light over a long period of time as this may damage the CCD. The camera and lens setup must be correct to avoid continual overexposure to bright light. A lens with an automatic iris is recommended under these conditions.
5. Before installing the lens, make sure that its back will not touch the CCD sensor or associated components when it is screwed into the camera.
6. For outdoor use, an appropriate protective housing conforming to IP65 or UL50 or better must be used.



### AUTO IRIS LENS CONNECTOR

The maximum load must not exceed 50 mA

## REGULATORY NOTICES

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.



## DESCRIPTION

The CCC2400 Series and the MCC2400 Series comprise color or monochrome cameras with 1/3-inch CCD imagers and a direct drive lens connector. All cameras accept CS lenses; C lenses can be used but require Pelco's PCMA40 C-mount adapter. Color cameras have digital signal processing (DSP) and auto white balance.

## MODELS

|             |   |
|-------------|---|
| CCC2400S-4  | Standard resolution (330 TV lines) color camera, 1.0 lux at f1.2, NTSC      |
| CCC2400S-4X | Standard resolution (330 TV lines) color camera, 1.0 lux at f1.2, PAL       |
| CCC2400H-4  | High resolution (470 TV lines) color camera, 1.2 lux at f1.2, NTSC          |
| CCC2400H-4X | High resolution (470 TV lines) color camera, 1.2 lux at f1.2, PAL           |
| MCC2400S-4  | Standard resolution (380 TV lines) monochrome camera, 0.1 lux at f1.2, EIA  |
| MCC2400S-4X | Standard resolution (380 TV lines) monochrome camera, 0.1 lux at f1.2, CCIR |

## CAMERA LAYOUT

Refer to Figure 1.

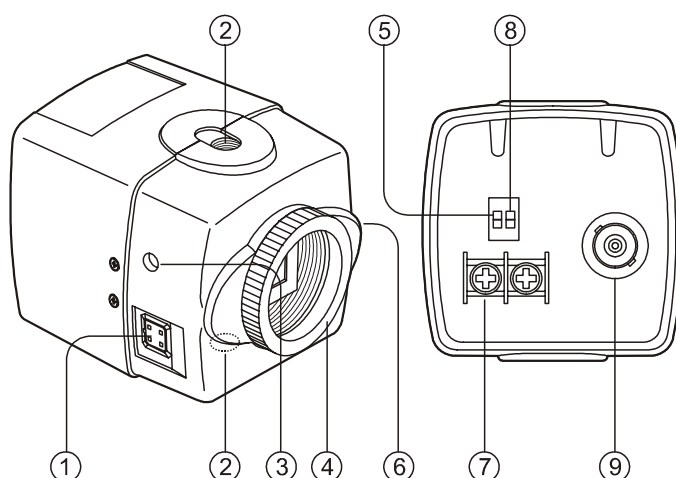
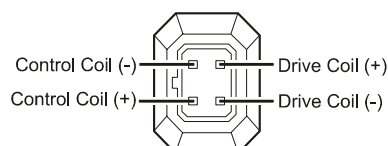


Figure 1. Location of Parts

- ① Auto Iris Lens Connector (DC drive only)
- ② Camera Mounts
- ③ Lens Level Adjustment
- ④ Lens Mount/Back Focus Adjustment Ring
- ⑤ Electronic Shutter Control (ESC) Switch
- ⑥ Back Focus Locking Screw (on the side of the camera)
- ⑦ Power Input Terminals
- ⑧ Backlight Compensation Switch
- ⑨ Video Output Connector

## INSTALLATION

1. The camera accepts a CS-mount lens with a fixed iris, manual iris, or direct drive auto iris. A C-mount lens can be used but requires Pelco's PCMA40 C-mount adapter. Screw the lens into the camera. For a direct drive auto iris lens, connect the four-pin plug to the auto iris lens connector on the camera.

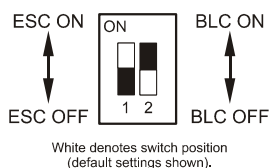


- Mount the camera. There are two 1/4-20 UNC mounting points, one on the top of the case and one on the bottom of the case.
- Connect power to the terminals on the back of the camera. The terminals will accept a Class 2 isolated power supply of 12 VDC +15%, -10% (10.8 to 13.8 VDC) with a ripple of less than 200 mV.
- Connect a video cable to the video output connector on the back of the camera.
- Set the electronic shutter control (ESC) switch on the camera. The electronic shutter control compensates for excessive light levels by automatically adjusting the shutter speed.  
If you have a manual iris lens, set the ESC switch OFF and adjust the lens for the correct exposure. Then set the switch ON.  
Set the switch ON when using a fixed iris lens.  
Set the switch OFF when using a direct drive auto iris lens.
- If the camera has an auto iris lens, adjust the lens level adjustment to obtain a 1 Vp-p setting. The ESC switch must be OFF.  
MCC2400S-4 and MCC2400S-4X Models Only—If the ESC switch is ON, the lens level adjustment potentiometer controls the exposure level when using a manual iris lens.
- Adjust the focus. Use a suitable tool to loosen the back focus locking screw, and then rotate the focus adjustment ring clockwise or counterclockwise. Tighten the locking screw when the adjustment is satisfactory.

## SPECIFICATIONS

|                             |  |
|-----------------------------|--|
| CCD Sensor:                 | 1/3-inch   |
| Electronic Shutter Control: | On/off   |
| Backlight Compensation:     | On/off   |
| White Balance:              | Automatic  |
| Signal Processing:          | Digital  |
| Power Requirements:         | 12 VDC +15%, -10%; ripple less than 200 mV                 |
| Power Connector:            | Screw terminals  |
| Video Connector:            | BNC  |
| Lens Jack:                  | 4-pin connector (miniature square)                         |
| Lens Mount:                 | C/CS-mount   |
| Camera Mount:               | Use 1/4-20 screw, top or bottom of camera housing          |
| Operating Temperature:      | 14° to 122°F (-10° to 50°C)                                |
| Dimensions (without lens):  | 2.9 (D) x 2.3 (W) x 2.3 (H) inches<br>(7.4 x 5.8 x 5.8 cm) |
| Weight (without lens):      | 0.32 lb (0.147 kg)   |

*(Design and product specifications subject to change without notice.)*



- Set the backlight compensation (BLC) switch on the camera. Backlighting compensates for backlit scenes by enhancing objects in the center of the scene that would previously have been in silhouette. BLC will function with a manual iris lens only when the ESC switch is on. BLC will function with a direct drive auto iris lens with the ESC switch on or off.

## WARRANTY AND RETURN INFORMATION

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of three years after the date of shipment.

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

- Model and serial number
- Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
- Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

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| Manual # | Date | Comments   |
|----------|------|--|
| C1989M   | 8/03 | Original version.                                      |
| C1989M-A | 7/04 | Changed warranty period from two years to three years. |